Cambridge City Council Meeting
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Policy Order 25

Why STEAM not STEM

Hello, my name is Eli Tucker-Raymond. I live at 140 Elm Street 02140 and I work as an educational researcher at the Chèche Konnen Center at TERC, a STEM education research and development organization in Porter Square. I am also co-coordinator with Khari Milner of the Cambridge Expanded Learning STEAM Network. I have been a member of the STEAM working group. I want to thank the council for considering this important initiative.

At the Network, our mission is to bring youth service providers and other stakeholders together, connect and capitalize on the existing and developing expertise in Cambridge, encourage STEAM professional development, and identify STEAM activity pathways for young people in Cambridge.

So why do we choose to support an agenda for learning that includes arts as opposed to what many other places are doing, which is to advocate for STEM only?

We believe that STEAM puts the focus of learning on creativity-an inherently human trait. And the arts and the sciences, in practice more similar than they are different, are both characterized by creativity. When we honor learners as creators of knowledge, rather than consumers, they can see themselves as contributors to the world. They can envision themselves as legitimate members of a community, even one as exclusive as science.

In addition to creative participation, STEAM is focused on what learners bring to the table; on serious inquiry about the world that requires close observation and critical thinking; and it involves taking risks as learners, failing, and trying again, something that is important for innovation, but which is anathema in the high-stakes testing world of our current national educational culture.

In my own work with Chèche Konnen as a researcher and designer of learning environments for young people, art and media science based programs have shown promise for engaging middle and high school students who have not historically done well in school.

In my work with adults, my team has been conducting interviews with people who consider themselves "makers." In one of the interviews we did, an artist/engineer who makes wearable art and kinetic sculptures, said: "I have a different mindset than everyone else. I want to put things into the world and they want to buy them."

We want Cambridge young people to learn from and participate in the creative cultures of Cambridge, to try out that mindset of putting things into the world rather than just consuming them. We want them to be the creators and innovators, not just of the future, but of the here and now. A city-wide effort that focuses on STEAM learning opportunities, especially for the most marginalized of our residents, will help to bring about this transformation. Thank you.